

| L Number | Hits  | Search Text   | DB                   | Time stamp       |
|----------|-------|---|----------------------|------------------|
| -        | 72    | HIGH ADJ PURITY ADJ TANTALUM  | USPAT                | 2004/03/06 09:01 |
| -        | 0     | 5N adj tantalum   | USPAT                | 2004/03/06 09:01 |
| -        | 61    | HIGH ADJ PURITY ADJ TANTALUM  | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 0     | 5N adj tantalum   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 0     | 5N ADJ3 TANTALUM  | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 2520  | (TANTALUM AND (GRAIN ADJ SIZE))   | USPAT                | 2004/03/06 09:01 |
| -        | 36217 | 148/\$.ccls.  | USPAT                | 2004/03/06 09:01 |
| -        | 389   | ((TANTALUM AND (GRAIN ADJ SIZE))) AND (148/\$.CCLS.))   | USPAT                | 2004/03/06 09:01 |
| -        | 1     | ((((TANTALUM AND (GRAIN ADJ SIZE))) AND (148/\$.CCLS.))) and center adj peak adj intensity        | USPAT                | 2004/03/06 09:01 |
| -        | 1     | tantalum and center adj peak adj intensity  | USPAT                | 2004/03/06 09:01 |
| -        | 183   | ((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE))                             | USPAT                | 2004/03/06 09:01 |
| -        | 260   | "99.995"  | USPAT                | 2004/03/06 09:01 |
| -        | 1     | ((148/668.CCLS.) AND (((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE))))     | USPAT                | 2004/03/06 09:01 |
| -        | 1     | ((148/dig.158.CCLS.) AND (((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE)))) | USPAT                | 2004/03/06 09:01 |
| -        | 1     | ((148/dig.14.CCLS.) AND (((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE))))  | USPAT                | 2004/03/06 09:01 |
| -        | 2     | ((148/668.CCLS.) AND ((HIGH ADJ PURITY ADJ TANTALUM)))  | USPAT                | 2004/03/06 09:01 |
| -        | 236   | (75/419).CCLS.  | USPAT                | 2004/03/06 09:01 |
| -        | 72    | (HIGH ADJ PURITY ADJ TANTALUM)  | USPAT                | 2004/03/06 09:01 |
| -        | 224   | (75/622).CCLS.  | USPAT                | 2004/03/06 09:01 |
| -        | 72    | (HIGH ADJ PURITY ADJ TANTALUM)  | USPAT                | 2004/03/06 09:01 |
| -        | 0     | 5N adj tantalum   | USPAT                | 2004/03/06 09:01 |
| -        | 2     | (5N ADJ3 TANTALUM)  | USPAT                | 2004/03/06 09:01 |
| -        | 20    | ((HIGH ADJ PURITY ADJ TANTALUM) AND SPUTTERING)   | USPAT                | 2004/03/06 09:01 |
| -        | 15    | ((HIGH ADJ PURITY ADJ TANTALUM) AND (GRAIN ADJ SIZE))   | USPAT                | 2004/03/06 09:01 |
| -        | 61    | (HIGH ADJ PURITY ADJ TANTALUM)  | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 0     | 5N adj tantalum   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 0     | (5N ADJ3 TANTALUM)  | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 2     | ((HIGH ADJ PURITY ADJ TANTALUM) AND (GRAIN ADJ SIZE))   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| -        | 2520  | (TANTALUM AND (GRAIN ADJ SIZE))   | USPAT                | 2004/03/06 09:01 |
| -        | 36217 | 148/\$.ccls.  | USPAT                | 2004/03/06 09:01 |
| -        | 389   | ((148/\$.CCLS.) AND TANTALUM) AND (GRAIN ADJ SIZE))   | USPAT                | 2004/03/06 09:01 |
| -        | 1     | ((((TANTALUM AND (GRAIN ADJ SIZE))) AND (148/\$.CCLS.))) and center adj peak adj intensity        | USPAT                | 2004/03/06 09:01 |
| -        | 1     | tantalum and center adj peak adj intensity  | USPAT                | 2004/03/06 09:01 |
| -        | 183   | ((RECRYSTALLIZE OR CRYSTALLIZE) AND TANTALUM) AND (GRAIN ADJ SIZE))                               | USPAT                | 2004/03/06 09:01 |
| -        | 260   | "99.995"  | USPAT                | 2004/03/06 09:01 |
| -        | 2     | ((("99.995" AND TANTALUM) AND (GRAIN ADJ SIZE)))  | USPAT                | 2004/03/06 09:01 |
| -        | 2     | ((148/422.CCLS.) AND (RECRYSTALLIZE OR CRYSTALLIZE) AND TANTALUM) AND (GRAIN ADJ SIZE))           | USPAT                | 2004/03/06 09:01 |
| -        | 2     | ((148/422.CCLS.) AND (RECRYSTALLIZE OR CRYSTALLIZE) AND TANTALUM) AND (GRAIN ADJ SIZE))           | USPAT                | 2004/03/06 09:01 |
| -        | 1     | ((148/dig.158.CCLS.) AND (((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE)))) | USPAT                | 2004/03/06 09:01 |
| -        | 5     | ((148/422.CCLS.) AND (HIGH ADJ PURITY ADJ TANTALUM))  | USPAT                | 2004/03/06 09:01 |
| -        | 2     | ((148/668.CCLS.) AND ((HIGH ADJ PURITY ADJ TANTALUM)))  | USPAT                | 2004/03/06 09:01 |

Search History 3/6/04 10:37:45 AM Page 1

|   |      |  |                      |                  |
|---|------|--|----------------------|------------------|
| - | 11   | ((420/427.CCLS.) AND (HIGH ADJ PURITY ADJ TANTALUM))   | USPAT                | 2004/03/06 09:01 |
| - | 82   | 148/422.CCLS.  | USPAT                | 2004/03/06 09:01 |
| - | 83   | "148/DIG.158".CCLS.  | USPAT                | 2004/03/06 09:01 |
| - | 115  | 148/668.CCLS.  | USPAT                | 2004/03/06 09:01 |
| - | 106  | "148/DIG.14".CCLS.   | USPAT                | 2004/03/06 09:01 |
| - | 186  | 420/427.CCLS.  | USPAT                | 2004/03/06 09:01 |
| - | 236  | (75/419).CCLS.   | USPAT                | 2004/03/06 09:01 |
| - | 72   | (HIGH ADJ PURITY ADJ TANTALUM)   | USPAT                | 2004/03/06 09:01 |
| - | 14   | ((75/419.CCLS.) AND TANTALUM)  | USPAT                | 2004/03/06 09:01 |
| - | 3    | ((HIGH ADJ PURITY ADJ TANTALUM) AND (AGITATOR OR LINING))  | USPAT                | 2004/03/06 09:01 |
| - | 224  | (75/622).CCLS.   | USPAT                | 2004/03/06 09:01 |
| - | 7    | ((75/622.CCLS.) AND (AGITATOR OR LINING))  | USPAT                | 2004/03/06 09:01 |
| - | 61   | (HIGH ADJ PURITY ADJ TANTALUM)   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| - | 0    | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND (AGITATOR OR LINING))   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| - | 96   | (TANTALUM AND (AGITATOR OR LINING))  | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| - | 24   | 75/622.ccls.   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| - | 224  | (75/622).CCLS.   | USPAT                | 2004/03/06 09:01 |
| - | 1244 | ((75/419) or (75/622) or (75/10.1) or (75/10.13) or (75/10.64) or (148/442) or (148/668) or (420/427)).CCLS. | USPAT                | 2004/03/06 09:01 |
| - | 2    | 5N ADJ3 TANTALUM   | USPAT                | 2004/03/06 09:01 |
| - | 20   | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND SPUTTERING)   | USPAT                | 2004/03/06 09:01 |
| - | 15   | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND (GRAIN ADJ SIZE))   | USPAT                | 2004/03/06 09:01 |
| - | 2    | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND (GRAIN ADJ SIZE))   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| - | 11   | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND SPUTTERING)   | EPO; JPO;<br>DERWENT | 2004/03/06 09:01 |
| - | 2    | ((("99.995") AND ((TANTALUM AND (GRAIN ADJ SIZE))))  | USPAT                | 2004/03/06 09:01 |
| - | 2    | ((148/422.CCLS.) AND (((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE))))                | USPAT                | 2004/03/06 09:01 |
| - | 2    | ((420/427.CCLS.) AND (((TANTALUM AND (GRAIN ADJ SIZE))) AND (RECRYSTALLIZE OR CRYSTALLIZE))))                | USPAT                | 2004/03/06 09:01 |
| - | 5    | ((148/422.CCLS.) AND ((HIGH ADJ PURITY ADJ TANTALUM)))   | USPAT                | 2004/03/06 09:01 |
| - | 11   | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND (420/427.CCLS.))  | USPAT                | 2004/03/06 09:01 |
| - | 82   | 148/422.CCLS.  | USPAT                | 2004/03/06 09:02 |
| - | 83   | "148/DIG.158".CCLS.  | USPAT                | 2004/03/06 09:02 |
| - | 115  | 148/668.CCLS.  | USPAT                | 2004/03/06 09:02 |
| - | 106  | "148/DIG.14".CCLS.   | USPAT                | 2004/03/06 09:02 |
| - | 1    | ("3268328").PN.  | USPAT                | 2004/03/06 09:02 |
| - | 186  | 420/427.CCLS.  | USPAT                | 2004/03/06 09:02 |
| - | 14   | ((75/419.CCLS.) AND TANTALUM)  | USPAT                | 2004/03/06 09:02 |
| - | 6    | ((75/419.CCLS.) AND (AGITATOR OR LINING))  | USPAT                | 2004/03/06 09:02 |
| - | 3    | ((((HIGH ADJ PURITY ADJ TANTALUM)) AND (AGITATOR OR LINING))   | USPAT                | 2004/03/06 09:02 |
| - | 54   | ((75/622.CCLS.) AND TANTALUM)  | USPAT                | 2004/03/06 09:02 |
| - | 7    | ((75/622.CCLS.) AND (AGITATOR OR LINING))  | USPAT                | 2004/03/06 09:02 |
| - | 6    | ((((TANTALUM AND (AGITATOR OR LINING))) AND (REDUCTION OR REDUCING))   | EPO; JPO;<br>DERWENT | 2004/03/06 09:02 |
| - | 1    | "3146094".PN.  | USPAT                | 2004/03/06 09:02 |
| - | 54   | ((75/622.CCLS.) AND TANTALUM)  | USPAT                | 2004/03/06 09:02 |
| - | 6    | ((("3146094") or ("3269830") or ("3801307") or ("3839020") or ("3847596") or ("3850623")).PN.                | USPAT                | 2004/03/06 09:02 |
| - | 3    | ((("75/622").CCLS.) AND AGITATOR   | USPAT                | 2004/03/06 09:02 |
| - | 159  | ((("75/622").CCLS.) AND (@PD <= "19720101"))   | USPAT                | 2004/03/06 09:02 |

|   |    |   |   |                  |
|---|----|---|---|------------------|
| - | 96 | ((75/419) or (75/622) or (75/10.1) or (75/10.13) or (75/10.64) or (148/442) or (148/668) or (420/427)).CCLS.) and @pd>=20000525 | USPAT   | 2004/03/06 09:02 |
| - | 3  | ("6331233").PN.   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 09:28 |
| - | 2  | ("6348113").PN.   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 09:44 |
| - | 2  | "9966100"   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 09:48 |
| - | 18 | "206159"  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 09:50 |
| - | 2  | "20020072475"   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 09:50 |

| L Number | Hits | Search Text  | DB   | Time stamp       |
|----------|------|--|--|------------------|
| 1        | 570  | (niobium or columbium) adj metal   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:39 |
| 5        | 0    | "ep0902102"  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 6        | 9819 | sputtering and (niobium or columbium or nb or cb)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 8        | 0    | niobium same (round or axial3) adj forg\$3   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 14       | 992  | sputtering adj target same manufactur\$4   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 15       | 1100 | sputtering adj target same manufactur\$4   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 17       | 141  | (148/668).CCLS.  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 18       | 84   | (148/422).CCLS.  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 19       | 154  | (420/425).CCLS.  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 20       | 939  | (204/298.12).CCLS.   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 21       | 578  | (204/298.13).CCLS.   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 22       | 1346 | ((204/298.12).CCLS.) ((204/298.13).CCLS.)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 23       | 1698 | ((148/668).CCLS.) ((148/422).CCLS.) ((420/425).CCLS.)<br>((204/298.12).CCLS.) ((204/298.13).CCLS.) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 25       | 357  | ((148/668).CCLS.) ((148/422).CCLS.) ((420/425).CCLS.)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |
| 27       | 3691 | sputter adj target   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:46 |

|    |     |   |  |                  |
|----|-----|---|--|------------------|
| 30 | 0   | round adj forge and (sputter adj target)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 31 | 0   | axial adj forge and (sputter adj target)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 32 | 0   | axial near2 forge and (sputter adj target)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 33 | 0   | axial near2 forg\$4 and (sputter adj target)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 34 | 0   | round near2 forg\$4 and (sputter adj target)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 36 | 0   | clean same forg\$4 and (sputtering adj target same<br>manufactur\$4 and (niobium or columbium or nb or cb)) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 3  | 6   | "8707650"   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 4  | 2   | "0902102"   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 7  | 25  | (niobium or columbium or nb or cb) near2 sputtering adj<br>target   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 9  | 1   | niobium and (round or axial3) adj forg\$3   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 10 | 38  | (round or axial3) adj forg\$3   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 11 | 2   | "62104180"  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 12 | 6   | "60118774"  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 13 | 2   | "61276975"  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 16 | 117 | (sputtering adj target same manufactur\$4) and (niobium or<br>columbium or nb or cb)                        | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |

|    |     |  |  |                  |
|----|-----|--|--|------------------|
| 24 | 97  | ((204/298.12).CCLS.) ((204/298.13).CCLS.) and (niobium or columbium or nb or cb)             | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 26 | 185 | ((148/668).CCLS.) ((148/422).CCLS.) ((420/425).CCLS.) and (niobium or columbium or nb or cb) | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 28 | 1   | upset adj forge and (sputter adj target)   | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 29 | 62  | crystal adj (orientat\$4 or texture) and (sputter adj target)                                | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 35 | 142 | sputtering adj target same manufactur\$4 and (niobium or columbium or nb or cb)              | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 37 | 27  | clean same forg\$4 and (niobium or columbium or nb or cb)                                    | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 38 | 141 | (148/668).CCLS.  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 39 | 124 | clean and forg\$4 and (niobium or columbium or nb or cb)                                     | USOCR                                      | 2004/03/06 10:47 |
| 40 | 6   | clean and forg\$4 and ((148/668).CCLS.)  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |
| 41 | 60  | clean near3 forg\$4  | USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/03/06 10:47 |